

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (withdrawn): An antifouling detergent comprising a polymer which comprises

a monomer unit A having at least one substituent selected from the group consisting of amino groups and quaternary ammonium groups and

a monomer unit B represented by $-\text{SO}_2-$, and a monomer unit C derived from a monomer selected from the following group:

(i) an anionic group-containing compound selected from acrylic acid or salts thereof, methacrylic acid or salts thereof, maleic acid or salts thereof, maleic anhydride, styrene sulfonate, 2-acrylamido-2-methylpropanesulfonate, allyl sulfonate, vinyl sulfonate, methallyl sulfonate, sulfopropyl methacrylate, and mono- ω -methacryloyloxyalkyl(C1 to 12) phosphate,

(ii) an amide group-containing compound selected from acryl(or methacryl)amide, N,N-dimethylaminopropylacryl(or methacryl)amide, N,N-dimethylacryl(or methacryl)amide, N,N-dimethylaminoethylacryl(or methacryl)amide, N,N-dimethylaminomethylacryl(or methacryl)amide, N-vinyl-2-caprolactam, and N-vinyl-2-pyrrolidone,

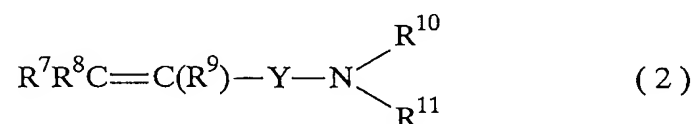
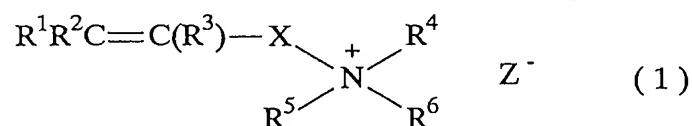
(iii) an ester group-containing compound selected from alkyl(C1 to C5) acrylate(or methacrylate), 2-hydroxyethyl acrylate(or methacrylate), N,N-dimethylaminoalkyl(C1 to 5) acrylate(or methacrylate), and vinyl acetate, and

(iv) an olefinic compound selected from ethylene, propylene, n-butylene, isobutylene, n-pentene, isoprene, 2-methyl-1-butene, n-hexene, 2-methyl-1-pentene, 3-methyl-1-pentene, 4-methyl-1-pentene, 2-ethyl-1-butene, styrene, vinyl toluene and α -methylstyrene

wherein the content of the monomer unit A in the whole monomer units is 10 to 99 mol-% wherein

the molar ratio of the monomer unit B to the monomer unit A is from 0.01 to 1.

Claim 2 (Withdrawn): The antifouling detergent according to claim 1, wherein the monomer unit A is selected from a compound represented by the general formula (1) and/or a compound represented by the general formula (2):



wherein R¹, R², R³, R⁷, R⁸ and R⁹ each represent a hydrogen atom, a hydroxyl group or a C₁₋₃ alkyl group;

X and Y are independently selected from the group consisting of a C₁₋₁₂ alkylene group, -COOR¹²-, -CONHR¹²-, -OCOR¹²- and -R¹³-OCO-R¹²- wherein R¹² and R¹³ each represent a C₁₋₅ alkylene group;

R^4 represents a C_{1-3} alkyl group, a C_{1-3} hydroxyalkyl group or $R^1R^2C=C(R^3)-X-$;

R⁵ represents a C₁₋₃ alkyl group, a C₁₋₃ hydroxyalkyl group or a benzyl group;

R⁶ represents a C₁₋₁₀ alkyl group optionally substituted with a hydroxy group, a carboxyl group, a sulfonate group, a sulfate group or a benzyl group, wherein when R⁶ comprises an alkyl group, a hydroxyalkyl group or a benzyl group, Z⁻ represents an anion and when R⁶ comprises a carboxyl group, a sulfonate group and a sulfate group, Z⁻ is absent, but R⁶ are anions;

R^{10} represents a hydrogen atom, a C_{1-3} alkyl group, a C_{1-3} hydroxyalkyl group or $R^7R^8C=C(R^9)-Y-$; and

R¹¹ represents a hydrogen atom, a C₁₋₃ alkyl or a C₁₋₃ hydroxyalkyl group.

Claim 3 (withdrawn): An antifouling detergent composition comprising the antifouling detergent as claimed in claim 1 and a surfactant.

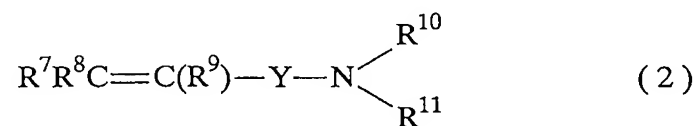
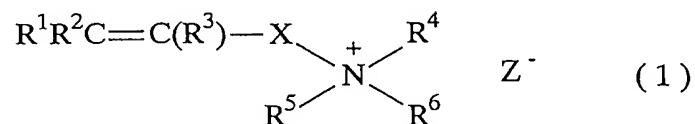
Claim 4 (withdrawn): The antifouling detergent composition according to claim 3, wherein the surfactant is a cationic surfactant.

Claims 5-7 (canceled):

Claim 8 (currently amended): A method of treating a hard surface comprising treating a hard surface with an antifouling detergent composition comprising an antifouling detergent and a surfactant, wherein said antifouling detergent comprises a polymer which comprises

a monomer unit A ~~having at least one substituent selected from the group consisting of amino groups and quaternary ammonium groups~~

derived from a compound represented by the general formula (1) and/or a compound represented by the general formula (2):



wherein R¹, R², R³, R⁷, R⁸ and R⁹ each represent a hydrogen atom, a hydroxyl group or a C₁₋₃ alkyl group;

X and Y are independently selected from the group consisting of a C₁₋₁₂ alkylene group, -COOR¹²-, -CONHR¹²-, -OCOR¹²- and -R¹³-OCO-R¹²- wherein R¹² and R¹³ each represent a C₁₋₅ alkylene group;

R⁴ represents a C₁₋₃ alkyl group, a C₁₋₃ hydroxyalkyl group or R¹R²C=C(R³)-X-;

R⁵ represents a C₁₋₃ alkyl group, a C₁₋₃ hydroxyalkyl group or a benzyl group;

R⁶ represents a C₁₋₁₀ alkyl group optionally substituted with a hydroxy group, a carboxyl group, a sulfonate group, a sulfate group or a benzyl group, wherein when R⁶ comprises an alkyl group, a hydroxyalkyl group or a benzyl group, Z⁻ represents an anion and when R⁶ comprises a carboxyl group, a sulfonate group and a sulfate group, Z⁻ is absent, but R⁶ are anions;

R¹⁰ represents a hydrogen atom, a C₁₋₃ alkyl group, a C₁₋₃ hydroxyalkyl group or R⁷R⁸C=C(R⁹)-Y-; and

R¹¹ represents a hydrogen atom, a C₁₋₃ alkyl or a C₁₋₃ hydroxyalkyl group and a monomer unit B represented by -SO₂-, and

a monomer unit C derived from a monomer selected from the following group:

- (i) an anionic group-containing compound selected from acrylic acid or salts thereof, methacrylic acid or salts thereof, maleic acid or salts thereof, maleic anhydride, styrene sulfonate, 2-acrylamido-2-methylpropanesulfonate, allyl sulfonate, vinyl sulfonate, methallyl sulfonate, sulfopropyl methacrylate, and mono- ω -methacryloyloxyalkyl(C1 to 12) phosphate,
- (ii) an amide group-containing compound selected from acryl(or methacryl)amide, N,N-dimethylaminopropylacryl(or methacryl)amide, N,N-dimethylacryl(or methacryl)amide, N,N-dimethylaminoethylacryl(or methacryl)amide, N,N-dimethylaminomethylacryl(or methacryl)amide, N-vinyl-2-caprolactam, and N-vinyl-2-pyrrolidone,

(iii) an ester group-containing compound selected from alkyl(C1 to C5) acrylate(or methacrylate), 2-hydroxyethyl acrylate(or methacrylate), N,N-dimethylaminoalkyl(C1 to 5) acrylate(or methacrylate), and vinyl acetate, and

(iv) an olefinic compound selected from ethylene, propylene, n-butylene, isobutylene, n-pentene, isoprene, 2-methyl-1-butene, n-hexene, 2-methyl-1-pentene, 3-methyl-1-pentene, 4-methyl-1-pentene, 2-ethyl-1-butene, styrene, vinyl toluene and α -methylstyrene

wherein the content of the monomer unit A in the whole monomer units is 30 to 99 mol-% wherein

the molar ratio of the monomer unit B to the monomer unit A is from 0.01 to 1 and
wherein the surface comprises the surface of a toilet bowl.

Claim 9 (canceled):

Claim 10 (new) the method of claim 8, wherein said concentration is 0.01 to 35 mass percent.

Claim 11 (new) The method of claim 8, wherein said antifouling detergent composition is a liquid.